

Removal of nickel(0) complexes and phosphorus ligands from nitrile mixtures

Abstract

15 A process for extractively removing nickel(0) complexes having phosphorus ligands and/or free phosphorus ligands from a reaction effluent of a hydrocyanation of unsaturated mononitriles to dinitriles by extraction by means of a hydrocarbon, a phase separation of the hydrocarbon and of the reaction effluent into two phases being effected at a temperature T (in °C),

10 wherein the content of nickel(0) complexes having phosphorus ligands and/or free phosphorus ligands in the reaction effluent of the hydrocyanation, depending on the temperature T, is at least y% by weight and, irrespective of the temperature T, is a maximum of 60% by weight, where the numerical value of the minimum content y is
15 given by the equation

$$y = 0.5 \cdot T + 20$$

and T is to be used in the equation as a dimensionless numerical value.